

ABSTRACT

Strip Material Used for shadow Mask Having Improved Post-Etching Shape

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A mild steel or Fe-Ni alloy used for a shadow mask has $TS/0.2\% YS \leq 1.03$.

The cross sections S_1 and S_2 of a strip parallel and perpendicular to the rolling direction (RD), respectively, are subjected to the residual stress, which vary in the thickness direction. The maximum tensile residual stress (σ_r) generated on a central portion of the cross sections S_1 and S_2 is adjusted to 50N/mm^2 or less.

A rectangle specimen elongated in the rolling direction (RD) is sampled from a rolled strip 1 shown at a central portion as seen in the width direction. Another rectangle specimen elongated in a direction perpendicular to the rolling direction (RD) is sampled from a rolled strip at a central portion as seen in the width direction. The 15 rectangle specimens are clamped at one of the ends and are suspended downwards in a direction of the long sides thereof. Warp of the other non-clamped ends is 10 mm or less.